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ABSTRACT

This survey determined the proportion of Arizona high school 1989 graduates who continued their educations, became employed, enlisted in the military, or chose another alternative. Of the 5,000 graduates originally selected, 1,380 graduates from 64 high schools responded to a mailed survey. Females, whites, and students with a high grade point average were more likely to respond. At graduation, 84 percent of the respondents planned to continue their educations, and 86 percent enrolled in some form of postsecondary education. At 2 years after graduation, 71 percent were still enrolled. Twenty-three percent intended to become employed, and three-fourths actually were employed in paid positions at 2 years. Of those who were employed, 32 percent were in full-time positions. While 4 percent planned to enlist in the military, 5 percent were actually enlisted. Respondents were basically satisfied with their high school experiences with regard to preparing them for the future, with 87 percent rating their experiences as very good or satisfactory. Two charts summarize activities after graduation and the distribution of grade point averages. Sixteen tables present survey responses and findings. (SLD)

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ED 330366

HIGH SCHOOL GRADUATE FOLLOW-UP STUDY

CLASS OF 1989

TWO YEARS AFTER GRADUATION

U.S. DEPARTMENT OF EDUCATION
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December 1991

TM 020268

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I. EXECUTIVE SUMMARY

The Arizona Student Assessment Plan uses high school graduate outcomes as one means of evaluating the success of educational reform efforts. To provide baseline data from which to measure change in graduate outcomes, this pilot survey was conducted during the summer of 1991. The objective was to determine what proportion of Arizona high school graduates continue their education, become employed, enlist in the military, or choose other alternatives. A representative sample of the 1989 Arizona public school graduates was selected for the survey. Of the 5,000 graduates and 70 high schools originally selected to participate in the survey, 1,380 graduates from 64 high schools responded to the survey.

Females, Whites, and graduates with a higher cumulative grade point average (GPA) were more likely to respond, affecting some of the conclusions that may be drawn from the survey.

Plans at Graduation - At graduation, 84% of the respondents planned to continue their education; 23% intended to be employed; 4% planned to enlist in military service; and 2% intended to become a homemaker or volunteer.

Enrollment in Post-Secondary Education - Of these respondents, 86% enrolled in some form of post-secondary education and 71% were currently enrolled, two years after graduation. Attrition rates were highest among Indian and Black graduates. The proportion of respondents who were ever enrolled and who are currently enrolled increased with higher GPAs. A large majority chose schools in Arizona. If these respondents were typical of all Arizona high school graduates with similar GPAs, it might be estimated that approximately 22% of our graduates are enrolled in a four year university in Arizona and approximately 66% are enrolled in any post-secondary program two years after graduation.

Employment - Three fourths of the respondents were employed in paid positions. Employed respondents who were also currently enrolled in a post-secondary educational program were less likely to be working in full-time positions (32%) than those who were employed but not attending school (80%). Most (78%) of the employed respondents indicated that their jobs were not closely related to their high school education and training.

Military Service - Only five percent of the respondents were enlisted in military service.

Unemployed - Of respondents who were not currently enrolled in post-secondary education, not employed, and not in the military service (6% of the respondents), approximately half are seeking employment.

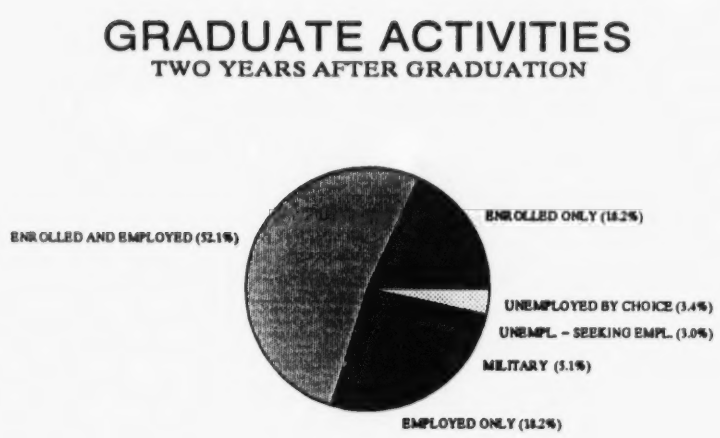
High School Preparation - Respondents were basically satisfied with their high school experiences in regard to preparing them for the future. Eighty-seven percent rated their experience as either very good or satisfactory; 29% gave their schools the highest (Very Good) rating.

In summary, the graduate outcomes from these respondents are shown in the table below.

Table 1
Graduate Activities Two Years After Graduation

Activity	Number	Percent
Enrolled in Post-Secondary (only)	251	18%
Enrolled and Employed	719	52%
Employed (only)	251	18%
Military	71	5%
Not Enrolled, Employed, or Military	88	6%
Completed community college	8	1%
Completed technical training	5	--%
Enrolled but discontinued	31	2%
Enrolled, current status unknown	3	--%
Never enrolled in post-secondary	41	3%
Seeking employment	41	3%
Not seeking employment	47	3%

Chart 1



II. INTRODUCTION

As part of the Goals for Educational Excellence legislation, the Arizona Department of Education (ADE) is required to conduct a follow-up study of the graduates of Arizona public schools. The Arizona Student Assessment Plan uses high school graduate outcomes as one means of evaluating the success of educational reform efforts. To provide baseline data from which to measure change in graduate outcomes, this pilot survey was conducted during the summer of 1991. The objective was to determine what proportion of Arizona high school graduates continue their education, become employed, enlist in the military, or choose other alternatives. A representative sample of the 1989 Arizona public school graduates was selected for the survey. This type of graduate follow-up study has been conducted by individual high schools or districts, and a similar study is conducted by ADE annually for vocational education students, but had not been conducted on a statewide basis for all graduates.

This pilot study tested the survey methodology and gathered basic information about graduates' activities two years after graduation. In the future, the annual survey will study graduate outcomes one year after graduation using slightly different methodology. Trends in graduate outcomes will be monitored and reported annually by ADE.

III. METHODOLOGY AND LIMITATIONS

A. Sampling Methodology

In the school year 1988-89, 31,638 students graduated from Arizona public schools. ADE requested copies of their transcripts for research purposes and received 31,089 (98%) records. The sampling for this survey was a combination of stratified, cluster, and random methods.

- Stratified sampling was used to select a proportionate number of graduates from urban (Maricopa and Pima Counties) and rural areas. Maricopa County represented 56% of the 1989 graduates; Pima, 18%; and all other, 26%. A sample of 5,000 graduates was drawn to the same proportions.

- Within those three categories, high schools were randomly selected. Half of the Maricopa and Pima Co. high schools and 35% of the rural high schools were selected for participation.

- The same proportion of students was drawn from each school in each category. That is, 24.6% of each of the Maricopa Co. high school's graduates, 22.1% of each Pima Co. high school, and 25% of each rural high school were selected.

- One Maricopa Co. high school with three graduates to be surveyed (Scottsdale Alternative) and one rural high school with two graduates (San Simon) were eliminated from the sample and the sample size increased accordingly for the school of closest student size within those categories.

The selected high schools are listed in Appendix A.

B. Survey Methodology

Believing that the response rate would be higher if the graduates received the survey from their high school, ADE requested the cooperation of seventy Arizona high schools in a memorandum dated May 28, 1991. Numbered survey forms, return envelopes, address labels, a cover letter, and instructions were mailed to the schools on July 12. Schools were asked to complete the address labels, reproduce the cover letter on their letterhead, and mail the surveys to the selected 1989 graduates on or before August 9, 1991. Copies of the memoranda and all survey materials are attached as Appendices B and C.

A list of non-respondents was mailed to each participating school in September. Schools notified ADE of mail that had returned as undeliverable, in order to estimate the proportion of surveys that had reached the graduates. Some schools made telephone calls to non-respondents to

encourage them to complete and return the survey form. One district[1] telephoned non-respondents and, when possible, completed the survey over the phone.

Information from the 5,000 selected students' transcripts, ethnicity, and gender) was entered into a master database file. As students responded, their responses were entered into the same file. The data were statistically analyzed using SPSS/PC+.

C. Limitations

Certain factors in the sampling and survey methodology adversely affected either the response rate or the validity of the survey data.

Sample Selection

- The number of graduates used for the automated random selection program differed from the schools' reported count of graduates or transcripts received in several cases.

Timing of Survey

- In the two years since graduation, many students have moved and locating them can be difficult. The students' mobility increased unforwardable mail and decreased the response rate.

- The survey was conducted during the summer, which decreased the number of responses and adversely affected the validity of survey data for the following reasons:

    - Many schools are understaffed or offices are closed during the summer. By the time the staff returned to work, the mailing deadline had passed or some surveys had been misplaced.

    - Questions regarding current status could easily have been misinterpreted. That is, students who are on summer break may or may not perceive themselves as currently enrolled, or they may be working full-time, whereas a month later they would be working part-time or not at all. Their responses may have been different if the study had been conducted during the school year.

School Involvement

- In requesting help from school staff, ADE conceded control of timing and methodology. Although most schools participated as instructed, there were several problems that

[1] Mesa Unified

decreased the response rate or adversely affected the validity of the survey data.

- Only half of the 70 schools had mailed out the surveys by the suggested deadline, August 9. By August 23 (the date suggested for returning surveys), 12 schools, had not mailed them out to graduates. Six schools[2], representing 7% of the sample, never mailed the surveys.

- Undeliverable mail returned to the schools[3]. In some cases, school staff attempted to locate the graduate and remail the survey form. In other cases, the mail was discarded without notation, so a precise count of undelivered surveys was not possible.

- Six schools[4], representing 5% of the sample, did not match the label numbers to the survey numbers, so some returns from those schools could not be correlated to GPA, gender, or ethnic data taken from the transcripts.

- One school[5] put the name labels on the survey forms, thereby identifying all respondents. The response rate for that school was slightly below the average.

Survey Issues - Terminology - Special Cases

Certain survey responses indicated areas of ambiguity in the survey that may have adversely affected the validity of the data. For example:

- There were no printed responses for community college out of state, correspondence courses, or taking occasional classes for personal interest.

- There was no printed response for LDS church missions, and unless it was specified on an "Other" line, there was no uniformity in their responses. Some graduates on missions indicated they had discontinued a post-secondary education, though they intend to re-enroll later. Some indicated full-time unpaid employment.

- Some respondents checked both full- or part-time employment and unpaid employment. It was unclear whether they are employed in one or both categories.

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[2] Globe, Coronado, Shadow Mountain, North, Show Low, and Tucson Extended Day High Schools.

[3] Not all schools reported back to ADE the number of surveys that had returned to them as undeliverable; however, those that did had approximately 15% of the surveys return as undeliverable.

[4] Buena, Thatcher, Wickenburg, Carl Hayden, Apache Junction, and Kofa High Schools

[5] Maryvale High School

- Military enlistees may have indicated their training as post-secondary education. For purposes of this study, post-secondary education is considered exclusive of military enlistment and education.

- Some respondents indicated they had not enrolled in an educational program after high school and also marked the option for having completed a technical training program. It was assumed they were referring to a high school technical training program.

- Several respondents checked conflicting responses, such as employed full-time and unemployed, seeking full-time employment.

- Non-respondents from one district were telephoned and, when possible, completed the survey by phone. That district was more likely than others to have reached graduates of lower GPAs, and it is likely that the respondents replied more favorably on some questions than they might have if completing the survey anonymously.

D. Methodological Refinements for Future Studies

- Future studies will survey graduates during the spring semester one year after graduation to increase the proportion of graduates contacted and to reduce ambiguity in responses to questions regarding current status. The sampling methodology will aim to contact 15% of the graduating class, expecting a return rate of 35%.

- Schools will be asked to supply mailing labels and a cover letter for their graduates, but will not be asked to mail the surveys in the next study. Surveys will be mailed from ADE in ADE envelopes so that all schools can be represented in the study, surveys will be mailed simultaneously and undeliverable mail can be more closely monitored.

- Transcript information will not be available in the next study. Graduates may be asked to self-report their cumulative GPA.

- Survey response options will be more clearly exclusive and each question will have more explicit instructions to diminish ambiguous or conflicting responses.

IV. ANALYSIS

A. Sample and Respondent Profile

ADE selected a sample of 5,000 transcripts for the survey. That number was reduced by 372 when six schools failed to mail their surveys. It was further reduced by approximately 15% for undeliverable mail. Approximately 4,000 surveys were presumed to have reached the selected graduates. The 1,380 who returned surveys by November 1, 1991 represent a response rate of 28% of the original sample or approximately 35% of those presumed to have received the survey. They represent about 4% of the 1989 graduating class.

The respondents overrepresent certain segments of the 1989 graduates. For example, females, White and Asian students and graduates with higher GPAs were more likely to respond to the survey. Response rate was very low for Black males: only three of 69 responded. The following table shows the proportion of ethnic and gender representation in the original sample (N=5,000) and respondents (N=1,380), and the response rate for each.

Table 2
Response Rate by Ethnicity and Gender

Ethnicity and Gender	Proportion in Sample *	Proportion of Responses	Response Rate *
White Female	35%	47%	37%
White Male	30%	32%	29%
Black Female	1%	1%	19%
Black Male	1%	--	4%
Hispanic Female	8%	9%	30%
Hispanic Male	7%	6%	23%
Indian Female	2%	2%	33%
Indian Male	1%	1%	20%
Asian Female	1%	1%	45%
Asian Male	1%	1%	34%
Unknown Ethnic Female	6%	--	
Unknown Ethnic Male	6%	--	
Total Female	53%	60%	31%
Total Male	47%	40%	24%

* Based on the original sample of 5000, which includes undelivered mail and surveys not sent.

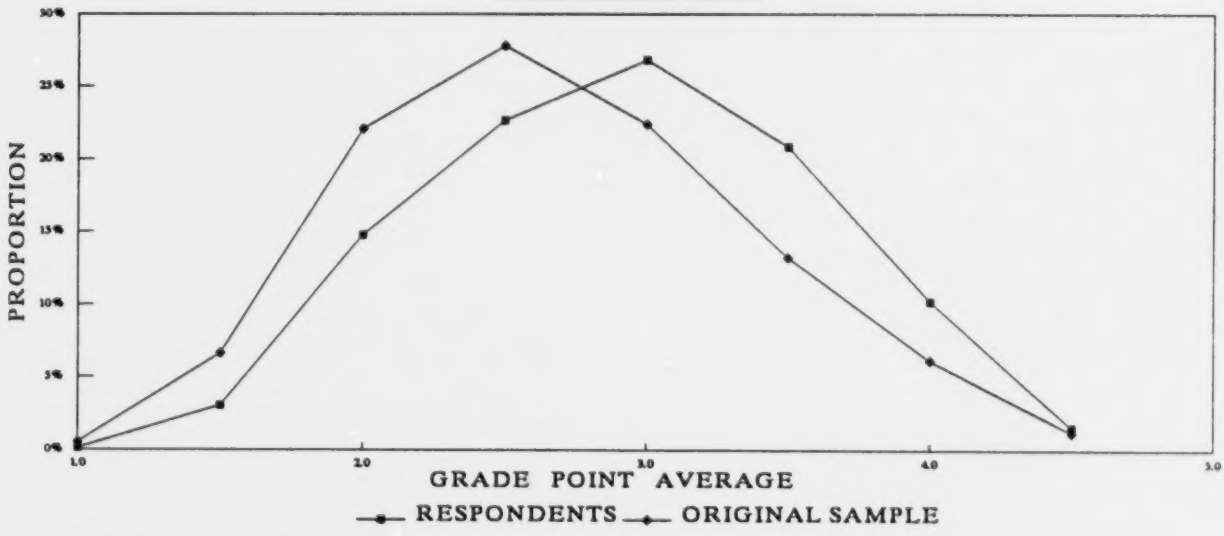
The following table shows response rate by GPA[6].

Table 3
Response Rate by GPA

GPA	Number of Responses	Number in Sample	Response Rate
1.5	39	324	12%
2.0	186	1003	19%
2.5	286	1263	23%
3.0	338	1017	33%
3.5	263	600	44%
4.0	129	279	46%
4.5	19	53	36%
Total	1260	4539	28%

The mean GPA for the original sample was 2.68; the mean GPA for the respondents was 2.92. GPAs for both the sample and the respondents were normally distributed, as shown in the chart below.

Chart 2
Distribution of GPAs



[6] GPAs were clustered so that each GPA category included the range of GPAs which were within .25 points. For example, GPAs of 2.75 through 3.24 were coded 3.0. All GPAs below 1.74 were coded 1.5 and all GPAs above 4.24 were coded 4.5. Some transcripts did not show cumulative GPA, and some respondents were not identifiable; these were excluded from statistical analysis of GPAs. The response rate was based on the original sample, which included undelivered mail and surveys not sent.

B. Plans at Graduation

At graduation, 84% of the respondents planned to continue their education; 23% intended to be employed; 4% planned to enlist in military service; and 2% planned to be a homemaker or volunteer[7].

The intent to continue education was most frequently expressed by Black (100%), Asian (90%) and Indian (89%) respondents. White and Hispanic respondents indicated an intent to continue their education in 83% of the responses. Female respondents were more likely (87%) than male respondents (79%) to have plans for post-secondary education.

Expectations rose with GPA. The mean GPA for students who indicated an intent to continue their education was 3.02; those who did not had an average GPA of 2.45. The table below shows the relationship of GPA and intent.

Table 4
Plans for Post-Secondary Education by GPA

	Plans for Post-Secondary	No Plans for Post-Secondary
1.5 and below	38%	62%
2.0	69%	31%
2.5	76%	24%
3.0	87%	13%
3.5	94%	6%
4.0 and above	98%	2%

Twenty-three percent of the respondents indicated they had plans at graduation to be employed. A much higher proportion of the graduates actually were employed at the time of the survey; it is probable that many whose primary plan was to continue their education did not also indicate their intent to be employed[8]. Hispanic (25%) and White (23%) respondents were more likely to indicate an intent to be employed than Indian (21%), Asian (15%), or Black (13%) students.

The intent to be employed decreased as GPAs rose. That is, the higher the graduates' GPAs, the less likely they were to indicate employment as part of their plans at graduation. While 55% of those with GPAs of 1.5 or below indicated they planned to be employed, only 6% of those with GPAs of 4.0 or above so indicated. The average GPA of those indicating an intent to be employed was 2.6; the average GPA of those who did not so indicate was 3.0.

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[7] Percentages total more than 100% because some respondents checked more than one response.

[8] Only 15% of the respondents who indicated they planned to continue their education also indicated they planned to work, but 74% of those currently in school are also working.

Only 4% of the respondents indicated they had planned to enlist in military service. Males were five times more likely than females to so indicate. Graduates with lower GPAs were more likely to indicate an intent to join the military: the average GPA for those with plans to enlist was 2.47, compared to an average GPA of 2.94 for those who did not have military service in their plans at graduation. The average GPA was slightly higher for those who actually enlisted (2.55) than for those who intended to enlist. None of the Black or Indian respondents indicated an intent to enlist; 4% of the White respondents, 5% of the Hispanic respondents and 8% of the Asian respondents so indicated.

The intent to be a homemaker or volunteer was indicated in only 2% of the responses. None of the minority respondents chose this option, and it did not correlate to GPA. The mean GPA of those who expressed an intent to be a homemaker or volunteer was 2.87.

C. Enrollment in Post-Secondary Education

Of these respondents, 86% enrolled in some form of post-secondary education after high school, and 71% were currently enrolled. The intent to enroll, actual enrollment, and current enrollment are shown in percentages by ethnicity and gender in the table below.

Table 5
Intent to Enroll Compared to Actual and Current Enrollment in Post-Secondary Education

	Intent to Enroll	Actual Enrollment	Current Enrollment
White Female	87%	90%	76%
White Male	78%	81%	70%
Black Female	100%	92%	77%
Black Male[9]	100%	100%	67%
Hispanic Female	85%	80%	60%
Hispanic Male	81%	81%	65%
Indian Female	85%	89%	52%
Indian Male	100%	82%	27%
Asian Female	89%	95%	74%
Asian Male	90%	90%	80%
Total Female	87%	89%	72%
Total Male	79%	81%	69%
Total	84%	86%	71%

[9] There were only three Black males in the respondent group, a sample too small to draw valid conclusions or to use percentages for analysis.

Some of the students who enrolled in post-secondary programs have completed a two year community college degree or a technical training program. Attrition rates, then, cannot be calculated as the difference between actual enrollment and current enrollment. Instead, it is appropriate to look at the proportion of students who began a post-secondary program and discontinued before finishing. Attrition rates were highest among Indian (21%) and Black (13%) graduates, and approximately 10% for White, Hispanic, and Asian graduates.

The proportion of respondents who were ever enrolled and who are currently enrolled in post-secondary education increased with higher GPAs, as shown in the following table. As expected, attrition rates are higher among graduates with GPAs of 2.5 and below. Twenty-seven percent of those with GPAs of 1.5 discontinued their studies after enrolling in a post-secondary program.

Table 6
Intent to Enroll Compared to Actual and Current Enrollment in Post-Secondary Education by GPA

	Intent to Enroll	Actual Enrollment	Current Enrollment
1.5 and below	38%	55%	36%
2.0	69%	74%	50%
2.5	76%	80%	61%
3.0	87%	88%	75%
3.5	94%	92%	80%
4.0 and above	98%	97%	93%

Of those who enrolled in any post-secondary education, a large majority (70%) chose Arizona schools. The following table shows the current status of students who ever enrolled in a post-secondary program. Percentages are based on the 1,180 respondents who are currently enrolled, and total more than 100% because respondents could indicate more than one item.

Table 7
Current Status of Graduates Who Enrolled in Post-Secondary Education

Enrolled in a four year university in Arizona	39%
Enrolled in a community college in Arizona	31%
Enrolled in a four year university outside Arizona	9%
Enrolled in a community college outside Arizona	1%
Enrolled in a technical training program	3%
Have completed a community college program	4%
Have completed a technical training program	5%
Had enrolled in post-secondary but discontinued	10%

The choice of a post-secondary program was closely related to GPA. The following table shows the proportion of all respondents who are currently enrolled in post-secondary education by GPA (where known). GPA was not known for 98 of the 982 currently enrolled respondents.

Table 8
Current Enrollment in Post-Secondary Education by GPA

	4 Yr. Univ.-AZ	4 Yr. Univ.-Out	Commun. Coll.-AZ	Commun. Coll.-Out	Technical Training
1.5 and below	5%	5%	41%	9%	9%
2.0	7%	3%	45%	3%	7%
2.5	25%	4%	40%	1%	4%
3.0	38%	8%	35%	1%	3%
3.5	51%	10%	23%	--	1%
4.0	67%	18%	8%	--	1%
4.5 and above	78%	22%	--	--	--
Total	34%	8%	27%	1%	3%
Mean GPA	3.32	3.33	2.75	2.39	2.52

Since the likelihood of enrolling in a post-secondary program increases with GPA and this survey was overrepresented by graduates with high GPAs, it would be erroneous to assume that 86% of all Arizona high school graduates enroll in post-secondary programs or that 71% are enrolled two years after graduation. A quick projection of the percentages of enrollment by GPA to the proportions of graduates by GPA would indicate that, two years after graduation, approximately 22% of the graduates are enrolled in a four-year Arizona university, and approximately 66% are enrolled in some form of post-secondary education (including out-of-state enrollment)[10]. This projection is somewhat validated by data gathered by the Arizona Board of Regents[11].

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[10] This assumes that the original survey population of 5,000 was representative of the total population of 1989 graduates in terms of distribution of GPAs, and that the respondents' choices were representative of the total population. No tests of these assumptions were possible with the data on hand; rates should be considered approximate at best.

[11] Arizona Board of Regents collects data from the three state universities (Arizona State University, University of Arizona, and Northern Arizona University) regarding the college freshmen who graduated from Arizona schools. Their most recent report shows that 5,725 of the 1990 graduates (18%) were enrolled in one of the three universities, with 89% of the fall enrollments continuing in the spring. The 1989 Graduate Outcome Survey did not distinguish between the three large universities and other four year universities in the state, such as Grand Canyon University, University of Phoenix, Prescott College, and Embry-Riddle Aeronautical University.

The schools which had more than 50% of their respondents currently enrolled in four-year post-secondary programs are listed in the table below. The average current enrollment in four-year programs was 42%.

Table 9
Schools with Highest Proportion of Respondents Enrolled in Post-Secondary Education

School	District	Respondents Enrolled
University High School	Tucson	95%
Chaparral High School	Scottsdale	82%
Flagstaff High School	Flagstaff	71%
Saguaro High School	Scottsdale	69%
Sabino High School	Tucson	69%
Blue Ridge High School	Blue Ridge	63%
Canyon del Oro High School	Amphitheater	63%
Coconino High School	Flagstaff	59%
Sunnyslope High School	Phoenix	58%
Amphitheater High School	Amphitheater	57%
Buena High School	Sierra Vista	55%
Marcos de Niza High School	Tempe	53%
Gilbert High School	Gilbert	52%
Washington High School	Glendale	52%
Sahuarita High School	Sahuarita	50%
Prescott High School	Prescott	50%
Mayer High School	Mayer	50%

D. Employment

Respondents were asked if they were currently employed, and if so, whether in full-time or part-time employment, or employed in an unpaid position such as homemaker or volunteer. For purposes of this analysis, only those employed in paid positions were considered to have been employed. Of the respondents, 75% were gainfully employed: 34% in full-time positions and 41% in part-time positions. Another 4% of the respondents said they were employed in unpaid positions.

Of those who were currently enrolled in a post-secondary program, 83% were also working, but they were more likely to be working in a part-time position than those who were only employed. The table below shows the proportion of respondents who were employed by enrollment status.

Table 10
Employment Status of Graduates

	Enrolled in Post-Secondary	Not Enrolled
Full Time	32%	80%
Part Time	68%	20%

White graduates were more likely to be working while attending school (86%) than any of the minority groups (Hispanic = 76%; Black = 73%; Asian = 61%; Indian = 18%). Of those who were not in school or the military, 41% of the Whites, 40% of the Blacks, 63% of the Hispanics, 30% of the Indians, and 20% of the Asians were employed in full-time paid positions.

Respondents who were not employed in either a paid or unpaid position were asked if they were seeking full-time or part-time paid employment. Respondents who indicated they were employed in an unpaid position were counted with those not seeking employment. Thirteen percent of the unemployed were seeking full-time paid employment; 29% were seeking part-time employment; and 58% were not seeking employment. The proportions were considerably different between those graduates who were also enrolled in post-secondary schools and those who were not. The table below shows the proportions of unemployed respondents seeking employment by their enrollment status.

Table 11
Unemployed Graduates by Enrollment Status

	In School	Not in School	Total
Seeking Full-Time Employment	6%	31%	13%
Seeking Part-Time Employment	37%	9%	29%
Not Seeking Employment	57%	60%	58%

Those respondents who were employed were asked whether their position was closely related to the education and training they received during high school or since graduation. Most of the employed respondents indicated that their jobs were not closely related to their high school training (78%) nor to training received since graduation (61%). As shown in the table below, employed respondents who were also in school were less likely to have a position closely related to high school or post high school education and training.

Table 12
Employed Graduates with Positions Related to Education

	In School	Not in School	Total
Position is Closely Related to High School Education	18%	28%	21%
Position is Closely Related to Education Since Graduation	33%	48%	37%

Students with higher GPAs were more likely to perceive their jobs as being closely related to post-secondary education (33%) than those with lower GPAs (21%).

E. Military

Only five percent of all the respondents were enlisted in military service, but that represented 11% of the male respondents and one percent of the female respondents. The proportion was approximately the same for White, Hispanic, and Asian males. None of the Black or Indian male respondents were enlisted, but the sample size for both groups was relatively small.

The average GPA for those who intended to enlist was 2.47 and the average GPA for those who actually enlisted was 2.55.

F. High Schools as Preparation for the Future

Respondents were asked to rate their high school experience in regard to preparing them for the future. These respondents were quite satisfied with their preparation: 87% rated their high school experience either very good or satisfactory preparation for the future. Twenty-nine percent gave their high school the highest rating.

Those who are currently enrolled in a post-secondary program were more likely to rate their high schools very good than those who were not currently enrolled. As GPAs increased, so did the likelihood of feeling well prepared for the future. Those who were unemployed were slightly more likely to rate their high schools poor in preparing them for the future than those who were employed. The table below shows the proportion of respondents by rating and other variables.

Table 13
Ratings of High Schools as Preparation for the Future

	Total	In School	Not Enrolled	High GPAs
Very Good	29%	30%	26%	47%
Satisfactory	58%	57%	62%	50%
Poor	12%	13%	12%	3%

Asian (particularly female) and Indian students were most likely to rate their preparation for the future as very good, as shown in the table below.

Table 14
Ratings of High Schools by Ethnicity

	White	Black	Hispanic	Indian	Asian
Very Good	29%	25%	25%	34%	38%
Satisfactory	58%	69%	62%	58%	46%
Poor	13%	6%	13%	8%	15%

G. Rural and Urban Comparisons

For rough comparisons of rural and urban graduates, students from schools in Maricopa and Pima Counties were considered to be urban, although there may be graduates living in rural areas within those counties. Likewise, all other graduates were considered rural, though there may be some living in urban areas (e.g. Flagstaff or Yuma). The response rate was lower for graduates from rural schools (25%) than from urban schools (28%).

A higher proportion of urban graduates (85%) than rural graduates (80%) intended to continue their education, but the proportion who actually enrolled in a post-secondary program was roughly the same (urban = 86%, rural = 84%). A higher proportion of urban graduates (9% of the respondents) than rural (5%) graduates were enrolled in out of state universities and community colleges (29% urban, 21% rural). More rural (11%) than urban (7%) graduates started a post-secondary program and discontinued.

Urban respondents were more likely (76%) than rural respondents (69%) to be employed, particularly in part-time positions. Urban respondents rated their high schools higher in regard to their being prepared for the future.

H. Ethnic and Gender Comparisons of GPAs

The mean GPAs by ethnic group varied from 2.43 to 3.14. For all ethnic groups, the mean GPAs were higher for those students who were currently enrolled in a post-secondary program, as shown in the table below.

Table 15
Mean GPAs by Ethnicity

	White	Black	Hispanic	Indian	Asian
Original Sample	2.77	2.37	2.48	2.28	2.92
Respondents	2.98	2.43	2.70	2.49	3.14
Currently Enrolled	3.11	2.45	2.84	2.68	3.31

Mean GPAs for female graduates were higher than for males, as shown in the table below.

Table 16
Mean GPAs by Gender

	Female	Male
Original Sample	2.73	2.61
Respondents	2.98	2.84
Currently Enrolled	3.10	2.99

GRADUATE FOLLOW-UP STUDY SAMPLE

	District	Number of Surveys	Number of Responses	Response Rate
Apache Co.				
Window Rock	Window Rock	35	11	31%
Round Valley	Round Valley	26	5	19%
Cochise Co.				
Buena	Sierra Vista	114	22	19%
Coconino Co.				
Flagstaff	Flagstaff	76	17	22%
Coconino	Flagstaff	91	27	30%
Page	Page	45	13	29%
Gila Co.				
Globe	Globe	39	0	0%
Hayden	Hayden-Winkelman	9	6	67%
Graham Co.				
Thatcher	Thatcher	20	9	45%
Maricopa Co.				
Buckeye Union	Buckeye Union	31	9	29%
Chandler	Chandler	100	23	23%
Deer Valley	Deer Valley	99	33	33%
Gilbert	Gilbert	102	27	26%
Apollo	Glendale	108	29	27%
Glendale	Glendale	45	4	9%
Independence	Glendale	56	9	16%
Sunnyslope	Glendale	66	26	39%
Washington	Glendale	73	25	34%
Mesa	Mesa	178	88	49%
Dobson	Mesa	202	86	43%
Mt. View	Mesa	209	94	45%

GRADUATE FOLLOW-UP STUDY SAMPLE

	District	Number of Surveys	Number of Responses	Response Rate
Maricopa Co., continued				
Red Mountain	Mesa	56	22	39%
Shadow Mountain	Paradise Valley	131	0	0%
Ironwood	Peoria	56	15	27%
Alhambra	Phoenix Union	88	21	24%
Trevor Browne	Phoenix Union	101	17	17%
Carl Hayden	Phoenix Union	96	21	22%
Maryvale	Phoenix Union	96	23	24%
North	Phoenix Union	66	0	0%
South Mountain	Phoenix Union	87	16	18%
Queen Creek	Queen Creek	14	5	36%
Chaparral	Scottsdale	114	38	33%
Coronado	Scottsdale	105	0	0%
Saguaro	Scottsdale	124	32	26%
Marcos de Niza	Tempe	115	40	35%
McClintock	Tempe	103	39	38%
Tempe	Tempe	75	22	29%
Tolleson	Tolleson	83	15	18%
Wickenburg	Wickenburg	21	6	29%
Mohave Co.				
Lake Havasu	Lake Havasu	49	13	27%
Kingman	Mohave Union	63	20	32%
Navajo Co.				
Snowflake	Snowflake	38	20	53%
Show Low	Show Low	23	0	0%
Blue Ridge	Blue Ridge	30	8	27%

GRADUATE FOLLOW-UP STUDY SAMPLE

	District	Number of Surveys	Number of Responses	Response Rate
Pima Co.				
Ajo	Ajo	13	6	46%
Amphitheater	Amphitheater	121	28	23%
Canyon del Oro	Amphitheater	114	32	28%
Baboquivari	Indian Oasis	8	4	50%
Flowing Wells	Flowing Wells	68	20	29%
Marana	Marana	78	22	28%
Sahuarita	Sahuarita	27	10	37%
Catalina	Tucson	57	11	19%
Extended Day	Tucson	8	0	0%
Palo Verde	Tucson	67	17	25%
Pueblo	Tucson	73	17	23%
Rincon	Tucson	57	17	30%
Sabino	Tucson	83	39	47%
Santa Rita	Tucson	95	26	27%
University	Tucson	31	18	58%
Pinal Co.				
Apache Junction	Apache Junction	42	9	21%
Casa Grande	Casa Grande	88	23	26%
Florence	Florence	14	2	14%
Maricopa	Maricopa	17	4	24%
Santa Cruz Co.				
Nogales	Nogales	84	20	24%
Yavapai Co.				
Bradshaw Mtn.	Humboldt	27	9	33%
Mayer	Mayer	9	2	22%
Mingus Union	Mingus Union	63	13	21%
Prescott	Prescott	85	18	21%
Yuma Co.				
Yuma	Yuma	98	28	29%
Kofa	Yuma	115	29	25%

Dear 1989 Graduate:

The Arizona State Legislature has asked the Department of Education to survey the graduates of Arizona high schools to determine, in part, how well they were prepared in high school for accomplishing their goals, and to see what proportion of graduates continue their education, enter the labor force, and choose other options. Your name was selected in a random sampling of the 1989 public school graduates to help with the assessment. This is a very valuable endeavor; I strongly encourage you to get involved.

As a graduate of this school, you have insight and experience that will provide important information for the study. Whether your high school experience and the past two years have been positive or negative, your opinions and activities are indicators of the school's success in preparing its graduates for the future. Because the survey has been mailed to only 15% of the 1989 graduates, every response is extremely important. Your answers are completely confidential; the coding number will only be used to identify graduates who do not respond before August 23, 1991. The Department of Education will total the responses from your class and report the totals (but not individual responses) back to the high schools and the Legislature.

The enclosed survey can be completed very quickly and a postage paid envelope is also enclosed for your convenience. Please take a minute now to check off your responses and return the survey. Thank you for your input. Best wishes to you for a happy and successful future.

Sincerely,

1989 GRADUATE ACTIVITY SURVEY

1. At graduation, what were your plans for the following year?

   A. Continue my education ____
   B. Be employed ____
   C. Serve in the military ____
   D. Be a homemaker or volunteer ____
   E. Other _____ ____

2. Did you enroll in an educational program after high school?

   Yes _____ No _____

   If so, which of the following describes your current status?
   A. Enrolled in a four year university in Arizona ____
   B. Enrolled in a four year university out of state ____
   C. Enrolled in a community college in Arizona ____
   D. Enrolled in a technical training program ____
   E. Have completed a community college program ____
   F. Have completed a technical training program ____
   G. Had enrolled in further education but discontinued ____
   H. Other _____ ____

3. Are you currently employed?

   Yes _____ No _____

   If employed, which of the following best describes your current status?
   A. Employed full time ____
   B. Employed part time ____
   C. Employed in an unpaid position ____
      (for example, homemaker or volunteer)

   Is your position closely related to the education and training you received during high school?

   Yes _____ No _____

   Is your position closely related to the education and training you have received since graduation?

   Yes _____ No _____

4. If unemployed, which of the following best describes your current status?

   A. Seeking full time paid employment ____
   B. Seeking part time paid employment ____
   C. Not seeking employment ____

5. Are you currently serving in the military?

Yes _____ No _____

6. How would you rate your high school experience in regard to preparing you for the future?

A. Very Good _____
B. Satisfactory _____
C. Poor _____

7. Ethnic Group:

White _____
Black _____
Hispanic _____
Amer. Indian _____
Asian _____

Sex:

Female _____
Male _____

8. Would you be willing to provide the Arizona Department of Education more information about your activities since high school?

Yes _____ No _____

If so,
Your name: _____
Address: _____
_____
Telephone: _____

Which of the following would you prefer?

A. Mail survey _____
B. Telephone interview _____
C. Personal interview _____

9. If you are currently working, would you allow your employer to provide the Arizona Department of Education more information about your duties and performance?

Yes _____ No _____

If so,
Your name: _____ Telephone _____
Supervisor's name: _____
Telephone number: _____
Employer (company name): _____
Company address: _____

Other comments you would like to make about your activity since graduation: _____

_____

Thank you very much for your time and cooperation. Your answers are considered confidential and will not be reported individually.

APPENDIX C

INSTRUCTIONS TO PARTICIPATING SCHOOLS

ARIZONA DEPARTMENT OF EDUCATION
1535 W. JEFFERSON ST.
PHOENIX, AZ 85007

CARYN R. SHOEMAKER
SCHOOL FINANCE UNIT
(602) 542-3652

==========

MEMORANDUM

DATE: May 28, 1991
TO: High School Principals
FROM: Caryn R. Shoemaker
SUBJECT: Graduate Follow-up Study

As part of the Goals for Educational Excellence legislation, the Arizona Department of Education has been mandated to study high school graduate outcomes. As a baseline measurement, we need to find out how many of our public school graduates continue their education, seek employment, enter military service, or choose other options. We also want to know how well prepared they are for post-secondary education.

This year we will survey approximately 15% of the graduates from the spring of 1989, selected by random sampling techniques. We chose to study graduates of two years ago because the high schools have provided us with the transcripts of 1989 graduates, which gave us an ideal opportunity to correlate choices and outcomes with a large base of academic information. That data is currently being analyzed by the Arizona Board of Regents and the Research Department of ADE.

Within the next few weeks, I will be mailing you the survey forms, a cover letter, and a list of the 1989 graduates selected. We believe the response rate will be greater if the survey and cover letter are issued from your high school, so we are soliciting your assistance in mailing the survey and coordinating the follow-up. Specific instructions will accompany the survey; careful compliance will improve the validity of the study.

Briefly, we anticipate you will be involved in the following phases:

- Reproducing the survey's cover letter on school stationery

- Mailing the brief survey to the pre-selected graduates. If you want to add your own survey questions to those on the ADE survey, you may attach one additional page. The graduates will be returning the surveys directly to ADE and, where applicable, we will forward to you the page of responses pertaining to your school.

- Following up on graduates whose letters return due to incorrect addresses. Soliciting the help of the 1989 class officers and classmates may be the best approach to accomplish this phase of the project.

ADE will conduct the other phases of the study, including the sampling, tallying and analyzing of responses, and writing the report to Legislature. Similar follow-up surveys by individual school districts suggest we can expect a response rate of 60% or better. I intend to report the results back to you by October. If you have conducted any similar research projects on your own, I would like to see the report of your most recent study for purposes of comparison.

If you will be assigning this project to a particular staff person, please ask the contact person to give me a call at 542-3652, and I will make all future contact regarding this project directly with her or him.

Thank you for your cooperation on this important study. As always, we hope the information produced will be helpful to you in strategic planning for your school, and an incentive to improving the quality of education in Arizona.

ARIZONA DEPARTMENT OF EDUCATION
1535 W. JEFFERSON ST.
PHOENIX, AZ 85007

CARYN R. SHOEMAKER
SCHOOL FINANCE UNIT
(602) 542-3652

==========

MEMORANDUM

DATE: July 12, 1991
TO: Graduate Follow-up Study Liaisons
FROM: Caryn R. Shoemaker
SUBJECT: Instructions for Conducting Graduate Follow-up Study

As noted in my memorandum of May 28, Arizona Department of Education has been mandated to survey high school graduates to determine what proportion continue their education, enter the labor force, enter military service or choose other options. We have randomly selected 15% of the 1989 graduates to survey by mail. The study involves 70 high schools, selected to represent both rural and urban areas of Arizona.

With this memorandum we are sending you the following supplies for the survey:

- o A cover letter **to be signed by a school official and reproduced on your school's stationery.**
- o ____ copies of the survey form, one for each of the selected graduates.
- o Postage paid return envelopes.
- o Address labels with the graduates' names preprinted.

In order to conduct a valid study, it is necessary for all schools to follow the same procedure on the same schedule. Please make every effort to follow the instructions and timelines shown below. If you cannot meet the deadlines below, please call me with your estimated date of compliance.

Before Friday, August 9, 1991:

1. Have the enclosed cover letter signed by a school official.
2. Reproduce the signed letter on your school stationery, one copy for each of the surveys to be mailed out.
3. Using the enclosed address labels, fill in the graduate's most recent known address and apply to #10 envelopes with your school's address printed in the upper left corner.
4. In each envelope, enclose a cover letter, the survey form which matches the number on the mailing label, and a postage paid envelope. **Because the coding number on the survey and label will be used to identify which graduates have and have not**

responded, please be very careful to match the survey number to the label number! Mail the surveys on or before August 9.

The postage paid return envelopes will deliver the completed surveys back to Arizona Department of Education, and I will cross off respondents' names as their surveys return. Surveys that do not reach the graduate will be returning to your school. Please make an effort to find a correct address for the graduate and remail the survey. If you believe this will require more staff time than you can expend (I understand that late August is a busy time for your staff), you may want to solicit the help of the 1989 class officers for this part of the project.

By August 23, 1991

- If your school's return rate does not approximate 60%, I will report to you which graduates have not returned their survey forms and ask your help in reminding them by phone to return the completed survey as soon as possible. Again, you may want to solicit the help of 1989 class officers in this part of the study.

I expect to report the study's conclusions to you and to the State Legislature by November, 1991. Please let me know if you have any questions regarding this study. ADE appreciates your assistance and cooperation. The study results will establish a baseline from which Arizona schools can measure trends in graduate outcomes.

ARIZONA DEPARTMENT OF EDUCATION
1535 W. JEFFERSON ST.
PHOENIX, AZ 85007

CARYN R. SHOEMAKER
SCHOOL FINANCE UNIT
(602) 542-3652

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MEMORANDUM

DATE: September 3, 1991
TO: High School Principals or Graduate Survey Liaisons
FROM: Caryn R. Shoemaker
SUBJECT: 1989 Graduate Activity Survey

Thank you for your cooperation with the 1989 Graduate Activity Survey. The responses are still coming in from graduates, many with good comments that you will find interesting. I expect to receive the bulk of the responses by the end of September and the report will probably be issued to you in October.

To date, I have received responses from ____ of the ____ graduates, or ____% of those we surveyed from your school. The overall response rate so far is 20% of the sample, but there have been problems that adversely affect the return rate:

- Some schools were late in mailing their surveys out to graduates, because their staffs do not work during the summer when the surveys were mailed from ADE to the schools. These schools represent 17% of the sample.

- Schools are experiencing about a 15% return rate for undeliverable mail. Sampling from a graduating class of two years prior, we expected to be unable to contact some graduates. In the future, I will probably survey graduates one year after graduation to increase the likelihood of surveys reaching their target.

- Four schools, whose graduates represent 5% of the sample, did not match the code numbers to the survey labels. Many of their returns are unusable, since I have no way to relate them to the transcripts.

I have attached a list of graduates from whom we have had <u>no response</u>. Please proceed as directed below:

1. Indicate which of the surveys have returned to you as undeliverable mail. You could just highlight their names on the list.

2. If you have the clerical help or volunteers (perhaps from the Class of 1989) who can follow up, telephone the remaining non-respondents and encourage them to return their completed surveys to ADE before September 23.

3. Return the list, indicating which were undeliverable, to me as soon as possible. If it would be easier, you could just remove the surveys and send me the undeliverable envelopes. Again, thank you for your cooperation.

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